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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,542	10/31/2003	Jonathan Qiang Li	10020618-1	3040

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AGILENT TECHNOLOGIES, INC.
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EXAMINER	
COUGHLAN, PETER D	
ART UNIT	PAPER NUMBER
2129	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,542

Applicant(s)

LI ET AL.

Examiner

Peter Coughlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/31/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

1. This office action is in response to an AMENDMENT entered July 7, 2006 for the patent application 10/699542 filed on October 31 2003.

2. The First Office Action of March 8, 2006 is fully incorporated into this Final Office Action by reference.

Status of Claims

3. Claims 1-7 are pending.

35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7 are rejected under 35 U.S.C. 101 for nonstatutory subject matter.

The computer system must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-

77. The invention is ineligible because it has not been limited to a substantial practical application. A solution that constructs a classifier based on one or more designs and operating characteristics curves for each classifier and selection design alternatives based on operating characteristics curves has no meaning in the real world. Selecting design alternatives is an abstract concept and not a practical application. The result has to be a practical application. Please see the interim guidelines for examination of patent applications for patent subject matter eligibility published November 22, 2005 in the official gazette.

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete." If the claim is directed to a practical application of the § 101 judicial exception producing a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101. Is the invention to be used as a drug therapy guide? Is the invention to be used as a diagnostic tool for diesel engines? Is the invention to be used in the insurance industry to predict life expectancies? If so, such results have not been claimed.

The invention must be for a practical application and either:

- 1) specify transforming (physical thing) or
- 2) have the FINAL RESULT (not the steps) achieve or produce a useful (specific, substantial, AND credible), concrete (substantially repeatable/ non-unpredictable), AND

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tangible (real world/ non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended, and if the specification discloses a practical application but the claim is broader than the disclosure such that it does not require the practical application, then the claim must be amended.

Claims that recite the abstract concepts of design alternatives, construction of operating curves, and selection of design alternatives are not statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 6, 7 are rejected under 35 U.S.C. 102(e) (hereinafter referred to as **Ewing**) being clearly anticipated by Ewing, U.S. Patent Publication 20030167135.

Claims 1 and 6.

Ewing anticipates selecting one or more design alternatives (**Ewing**, ¶0052; 'Design alternatives' of applicant is equivalent to 'descriptor' of Ewing.), constructing a classifier for each alternative using sample data (**Ewing**, ¶0052; 'Constructing a

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classifier' of applicant is equivalent to 'mathematical expression' of Ewing.), construction Operating Characteristics curves for each classifier (**Ewing**, ¶0021; 'Operating Characteristics curve' of applicant is equivalent to 'model' of Ewing.), and selecting a design alternative based on the Operating Characteristic curves. (**Ewing**, ¶0021; 'Selecting' of applicant is achieved by 'process converges to a model...' of Ewing.)

Claims 2 and 7.

Ewing anticipates weighting each Operating Characteristics curve using cost constraints to form a result (**Ewing**, ¶0072, ¶0073 and ¶0115; 'Result' of applicant is equivalent to 'weighted average values' of Ewing.), and selecting the Operating Characteristics curve with the minimal result. (**Ewing**, ¶0021; 'Selecting' of applicant is achieved by 'process converges to a model based on a minimum set of descriptor identified as significant for the model' of Ewing.)

Claim 3.

Ewing anticipates classifiers for each alternative are constructed from sample data gathered through data acquisition. (**Ewing**, ¶0050; 'Sample data' of applicant is equivalent to 'training set' of Ewing.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(e) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ewing in view of Kondo et al (U. S. Patent Publication 20030167135, referred to as **Ewing**; U. S. Patent 4181715, referred to as **Kondo**).

Claim 4.

Ewing does not teach data acquisition uses a factorial design when more than one alternative is present.

Kondo teaches data acquisition uses a factorial design when more than one alternative is present. (**Kondo**, C9:12-26) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Ewing by implementing a standard statistical method of factorial design as taught by Kondo to have data acquisition process that incorporates a factorial design when more than one alternative is present.

For the purpose of illustrating interactions between design alternatives properly.

Claim 5.

Ewing does not teach data acquisition uses a one-way layout when only one alternative is present. (**Kondo**, C9:12-26)

Knodo teaches data acquisition uses a one-way layout when only one alternative is present. (**Kondo**, C9:12-26) It would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to modify the teachings of Ewing by implementing a standard statistical method of one way layout as taught by Kondo to have data acquisition process that incorporates a one-way layout when only one alternative is present.

For the purpose of using an algorithm that uses only two designs (one of which is an alternative).

Response to Arguments

5. Applicant's arguments filed on July 7, 2006 for claims 1-7 have been fully considered but are not persuasive.

6. In reference to the Applicant's argument:

In the Office Action mailed 03/0/2006, Claims 1-7 are pending in the application. Claim 6 has been amended.

Claims 1-7 are rejected under 35 USC 101.

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Claims 1, 2, 3, 6, and 7 are rejected under 35 USC 102(e) as being anticipated by Ewing (CTS 20030167135).

Claims 4 and 5 are rejected under 35 USC 103(e) as being unpatentable over Ewing in view of Kondo (US 4,181,715). :

Resections Under 35 U.S.C. 4 101

Claims 1 - 7 are rejected under 35 USC § 101. This rejection is respectfully traversed.

35 U.S.C. § 101 provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." M.P.E.P. § 2106.IV.A. explains:

As cast, 35 U.S.C. 101 defines four categories of inventions that Congress deemed to be the appropriate subject matter of a patent; namely, processes, machines, manufactures and compositions of matter. The latter three categories define "things" while the first category defines "actions" See 35 U.S.C. 100(b) ("The term 'process' means process, art, or method, and includes a new use of a known process, machine manufacture, composition of matter, or material_").

Thus, a process is recognized specifically by 35 U.S.C. § 101 as appropriate subject matter of a patent. Further, a number of Safe Harbors exist that automatically establish a claimed process as statutory subject matter. For example, the Pre-Computer Process Activity Safe Harbor takes a process statutory if it requires measurements of physical objects or activities to be transformed outside of the computer into computer data. M.P.E.P. § 2106_N.B.2.(b).

To reject a claim under 35 U.S.C. § 101, the M.P.E.P requires that an Examiner establish a prima facie case for each claim, showing that the claimed invention as a whole is directed solely to an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when a claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. § 101, and when such a rejection is made, Office personnel must expressly state how the language of the claims has been interpreted to support the rejection. Only one practical application is necessary to satisfy the utility requirement. M.P.E.P. § 2106.11.A..

Applicant respectfully asserts that the language of the claims clearly state patentable subject matter. Independent Claim 1 claims a method for selecting a tester design from one or more design alternatives. This method is patentable subject matter under 101. Independent Claim 6 clearly claims a computer readable medium, also appropriate subject matter for a patent

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Accordingly, Applicant requests withdrawal of the 35 U.S.C. § 101 rejection of the claim 16 and asserts that claims 1 Through 7 are patentable.

Examiner's response:

Applicant has not stated the practical employment of the invention. As stated in section 4 of this Office Action the claims define an abstract concept without a real world function or purpose. A tester design unto itself is abstract. First Office Action applies.

7. In reference to the Applicant's argument:

REJECTIONS UNDER 35 U.S.C. 102

Claims 1, 2, 3, 6 and 7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ewing (US 20030167135). This rejection is respectfully traversed.

A cited prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP § 2131; In re Bond, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. MPEP § 2131; In re Donohue, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Applicant respectfully submits that Ewing does not teach (expressly or inherently) at least the following features Ewing in independent Claim 1: constructing Operating Characteristics curves for each classifier, and selecting a design alternative based on the Operating Characteristics curves. The "model" of Ewing predicts biological or other activity by using transformed descriptor values. The descriptors are transformed via transformation functions that convert the raw descriptor values to new values ... In other words, the models are comprised of one or more descriptor transformation functions. (Ewing para 0016). Thus, a model in Ewing is a mathematical expression which transforms the input variables into an output value. In great distinction, an Operating Characteristics curve is the mathematical characterization of the false identification rates of the underlying classifier that include false positive and false negative (escape) rates. The model of Ewing is not the equivalent of the Operating Characteristics curve of Applicant's invention. Ewing does not teach or suggest using Operating Characteristic

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curves. The rejection with respect to Claim 1, and dependent claims 2 and 3 which depend on Claim 1, should be withdrawn.

Similarly with respect to Claims 6 and 7, Ewing does not teach the construction of Operating Characteristics curves for each classifier, the model described in Ewing is not the equivalent of Applicant's Operating Characteristics curves: The rejection should be withdrawn.

Examiner's response:

The terms 'false identification rates', 'false positive' and 'false negative' are not mentioned in the specification. The terms 'false identification rates', 'false positive' and 'false negative' are not mentioned in the claims. 'Operating characteristic curves' of applicant is equivalent to 'model' of Ewing. (Ewing, ¶0021) First Office Action stands.

8. In reference to the Applicant's argument:

35 U.S.C. 103 – OBVIOUSNESS

Claims 4 and 5 are rejected under 35 USC 103(e) as being unpatentable over Ewing in view of Kondo "(US 4;181,715).: This rejection is respectfully traversed.

A prima facie case Of obviousness: is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. In re Bell, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cit. 1993). To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP §2142_'

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When a proposed modification of combination of the prior art would render the prior art invention unsatisfactory for its intended purpose or change the principle of operation of the prior art invention, there is no suggestion or motivation to make the proposed modification. As a result, the teachings of the references are not sufficient to render the claims prima facie obvious. MPEP § 2143.01.

As discussed above, Ewing does not teach the use of Operating Characteristics curves. Neither Ewing nor Kondo teach or suggest using factorial design in combination with the use of Operating Characteristics curves. The rejection should be withdrawn.

Examiner's response:

Ewing teaches operating characteristics curves.

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of references. In re Nomiya, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is not what individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In re Keller, 648 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Sernaker, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983); In re McLaughlin, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In re Bozek, 163 USPQ 545 (CCPA 1969). First Office Action stands.

Examination Considerations

9. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has the full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

10. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and sprit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but link to prior art that one of ordinary skill in the art would find inherently appropriate.

11. Examiner's Opinion: Paragraphs 9 and 10 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

13. Claims 1-7 are rejected.

Correspondence Information

14. Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner Peter Coughlan, whose telephone number is (571) 272-5990. The Examiner can be reached on Monday through Friday from 7:15 a.m. to 3:45 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor David Vincent can be reached at (571) 272-3687. Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,
Washington, D. C. 20231;

Hand delivered to:

Receptionist,
Customer Service Window,
Randolph Building,
401 Dulany Street,
Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

(571) 273-8300 (for formal communications intended for entry.)

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for


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unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



Peter Coughlan

8/31/2006



9/5/06
DAVID VINCENT
SUPERVISORY PATENT EXAMINER